

CLAIMS

[1] A road guide system in which a server (1) and a terminal (3) are connected via a network, wherein

said server (1) comprises:

5 road information storing means for storing road information including information regarding roads and information regarding predetermined guide points;

three-dimensional image storing means for storing three-dimensional images of the guide points included in the road information, on which images a reference orientation is defined;

10 guide image generating means for reading a three-dimensional image of a corresponding guide point in response to a request from said terminal (3), and generating a three-dimensional guide image by combining a figure indicating a road to be taken by a user which road is searched out based on the road information on the read three-dimensional image; and

15 guide image sending means for sending the three-dimensional guide image generated by said guide image generating means to said terminal (3), and said terminal (3) comprises:

guide requesting means (35) for sending information specifying a guide point to said server (1) and requesting said server (1) to give a guide for a road to take at the guide point;

guide image receiving means (31, 32) for receiving the three-dimensional guide image sent from said server (1) in response to the requesting by said guide requesting means (35); and

25 displaying means (36) for displaying the three-dimensional guide image received by said guide image receiving means in a manner that a display orientation of the three-dimensional guide image is freely changed.

[2] The road guide system according to claim 1, wherein said three-dimensional

image storing means stores three-dimensional images each made up of a plurality of images sequentially captured with a predetermined orientation referred to as a reference.

[3] A road guide system in which a server (1) and a terminal (3) are connected via a network, wherein

5 said server (1) comprises:

road information storing means for storing road information including information regarding roads and information regarding predetermined intersections;

three-dimensional image storing means for storing three-dimensional images of the intersections included in the road information, on which images a reference orientation is 10 defined;

guide image generating means for reading a three-dimensional image of a corresponding intersection in response to a request from said terminal (3), and generating a three-dimensional guide image by combining a figure indicating an orientation for a user to go on the read three-dimensional image in accordance with the reference 15 orientation; and

guide image sending means for sending the three-dimensional guide image generated by said guide image generating means to said terminal (3), and

said terminal (3) comprises:

guide requesting means (35) for sending information specifying an intersection to 20 said server (1) and requesting said server (1) to give a guide for an orientation to go from the intersection;

guide image receiving means (31, 32) for receiving the three-dimensional guide image sent from said server (1) in response to the requesting by said guide requesting means; and

25 displaying means (36) for displaying the three-dimensional guide image received by said guide image receiving means (31, 32) in a manner that a display orientation is freely changed within a predetermined angle.

[4] The road guide system according to claim 3, wherein the guide image generating means generates a three-dimensional guide image including image portions corresponding to an orientation to which a user has been guided and an orientation to which the user should go to, based on the read three-dimensional image.

5 [5] The road guide system according to claim 4, wherein the displaying means (36) displays the three-dimensional guide image by changing the display orientation of the three-dimensional guide image from the orientation to which the user has been guided to the orientation to which the user should go to.

[6] A road guide system in which a server (1) and a terminal (3) are connected 10 via a network, wherein

said server (1) comprises:

three-dimensional image storing means for storing three-dimensional images of predetermined guide points, on which images a reference orientation is defined;

road information obtaining means for obtaining road information including 15 information regarding roads and information regarding a corresponding guide point in response to a request from said terminal (3);

guide image generating means for searching out a road along which guiding should be performed based on the road information obtained by said road information obtaining means, reading a three-dimensional image of the corresponding guide point from said 20 three-dimensional image storing means, and generating a three-dimensional guide image by combining a figure indicating the searched-out road along which guiding should be performed on the read three-dimensional image; and

guide image sending means for sending the three-dimensional guide image generated by said guide image generating means to said terminal (3), and

25 said terminal (3) comprises:

guide requesting means (35) for sending information specifying a guide point to said server (1) and requesting said server (1) to give a guide for a road to take at the guide

point;

guide image receiving means (31, 32) for receiving the three-dimensional guide image sent from said server (1) in response to the request by said guide requesting means (35); and

5 displaying means (36) for displaying the three-dimensional guide image received by said guide image receiving means (31, 32) in a manner that a display orientation of the three-dimensional guide image is freely changed.

[7] The road guide system according to claim 6, wherein
said road information obtaining means obtains guide map information including the
10 corresponding guide point,

said guide image generating means further comprises means for generating a map image on which a display range of the generated three-dimensional guide image is displayed based on the guide map information obtained by said road information obtaining means, and said guide image sending means sends the map image together with
15 the three-dimensional guide image to said terminal (3), and

said displaying means comprises means for displaying the display range of the three-dimensional guide image on the map image in a manner that the display range is freely changed in conjunction with the display orientation of the three-dimensional guide image.

20 [8] A server for use in navigation, comprising:

three-dimensional image storing means for storing three-dimensional images of predetermined guide points, on which images a reference orientation is defined;

guide route storing means for storing a guide route searched out in response to a request from a terminal (3) connected via a network (9);

25 guide image generating means for reading a three-dimensional image of a guide point specified by a guide request from said terminal (3), and generating a three-dimensional guide image by combining a figure indicating a road to be taken by a

user on the read three-dimensional image based on the guide route stored in said guide route storing means; and

guide image generating means for sending the three-dimensional guide image generated by said guide image generating means to said terminal (3).

5 [9] A road guide method involving use of a system in which a server (1) and a terminal (3) are connected via a network, said server comprising road information storage unit for storing road information including information regarding roads and information regarding predetermined guide points and a three-dimensional image storage unit for storing three-dimensional images of the guide points included in the road information on 10 which images a reference orientation is defined, said method comprising:

a guide requesting step (S11, S14) of sending information specifying a guide point from the terminal (3) to the server (1) and requesting the server to give a guide for a road to take at the guide point;

15 a guide image generating step (S24) of reading a three-dimensional image of the corresponding guide point in response to the request at said guide requesting step (S11, S14), and generating a three-dimensional guide image by combining a figure indicating the road to be taken by a user which road is searched out based on the road information on the read three-dimensional image;

20 a guide image sending step (S25) of sending the three-dimensional guide image generated at said guide image generating step (S24) from the server (1) to the terminal (3);

a guide image receiving step (S15) of receiving the three-dimensional guide image sent from the server (1) at said guide image sending step (S25); and

25 a display controlling step (S15) of displaying the three-dimensional guide image received at said guide image receiving step (S15) on a display unit of the terminal (3) in a manner that a display orientation of the three-dimensional guide image is freely changed.

[10] A road guide method involving use of a server (1) comprising a

three-dimensional image storage unit for storing three-dimensional images of predetermined guide points on which images a reference orientation is defined, and a terminal (3) connected to the server (1) via a network, said method comprising:

a guide requesting step (S11, S14) of sending information specifying a guide point 5 from the terminal (3) to the server (1) for requesting a guide for a road at the guide point;

a road information obtaining step of obtaining road information including information regarding roads and information regarding the corresponding guide point in response to the request at said guide requesting step (S11, S14);

a guide image generating step (S24) of searching out a road to be taken by a user 10 based on the road information obtained at said road information obtaining step, reading a three-dimensional image of the corresponding guide point from the three-dimensional image storage unit, and generating a three-dimensional guide image by combining a figure indicating the searched-out road on the read three-dimensional image;

a guide image sending step (S25) of sending the three-dimensional guide image 15 generated at said guide image generating step (S24) to the terminal (3);

a guide image receiving step (S15) of receiving the three-dimensional guide image sent at said guide image sending step (S25); and

a display controlling step (S15) of displaying the three-dimensional guide image received at said guide image receiving step (S15) on a display unit of the terminal (3) in a 20 manner that a display orientation of the three-dimensional guide image is freely changed.